The Influence of Mobile Technology Adoption among Secondary School Teachers Using the UTAUT2 Model

Mohd Norakmar Omar, Siti Noor Ismail, Abd Latif Kasim

Abstract*: Mobile technology (MT) is a mobile device that has become a fixture of gadget enthusiasts, and its use has proliferated around the world in recent years. The situation is becoming more and more popular in the field of education. As a teacher, they are also directly involved in the benefits of MT. Most teachers use MT for personal purposes such as accessing email, communicating through social media and browsing web pages. However, it is difficult to determine the driving force behind the use of MT to improve teaching. Therefore, this study was conducted to identify factors influencing teachers' behavioral intention to use MT (TBIMT) based on the UTAUT2 Model. A total of 422 secondary school teachers in the state of Kedah, Malaysia, were selected as respondents of the study. The findings show that only three components of UTAUT2 influence TBIMT in teaching, namely EE, HM and HT. In conclusion, teachers can manipulate the advantages of MT to create more effective teaching strategies.

***Keywords* : UTAUT2, Mobile Technology, Secondary School, Malaysia Teacher, Technology Acceptance.**

I. INTRODUCTION

Mobile technology (MT) is a device that is gaining popularity among consumers. In addition to the low cost, MT can be carried and used anywhere [1]. MT is most effective when used in conjunction with internet facilities. With the availability of the internet, users can access any information in the world using only MT [2]. Examples of MT devices commonly used today are smartphones, laptops, notebooks, and tablets. The use of MT is not only popular among adults, but it is also increasingly popular to integrate it into the school-based learning curriculum [3]. In the education system, the use of MT is gaining attention from various parties, especially its importance in improving the teachers' teaching quality and student learning [4].

Various efforts are being made by the government to ensure the maximum advantage of MT. The emergence of online educational applications and portals has opened a more extensive space for teachers and students to explore and use them more fully [5]. Examples of commonly used platforms are Google Classroom, Virtual Learning Environment (VLE) Frog and social media such as Facebook and Twitter. Through the platform provided, teachers can adapt MT devices to streamline teaching processes to create more meaningful learning outcomes for students [6]. In some schools, administrators allow students to bring MT devices for use in the learning process. This phenomenon is better known as mobile learning (m-learning), where the interaction between teacher and student can be implemented directly and can be a fun learning process [7].

In some countries, including Malaysia, MT integration among teachers is still not widely practiced, especially in secondary schools. The critical issue facing teachers is the level of integration of MT in enhancing teaching effectiveness [8], [9], [10]. Some teachers fear the use of technology devices will increase their workload and responsibility in teaching [8]. Some teachers have a low attitude and confidence in their ability to enhance teaching through MT [9]. Besides, constraints such as location, student attitude and lack of emphasis on administration are the reason for teachers' readiness to integrate MT in the classroom [10]. Based on these gaps, a study should be conducted to identify factors driving teachers' use of MT in the teaching process.

II. LITERATURE REVIEW

Technology acceptance is an issue that scholars have been addressing since the 1970s. More recently, UTAUT2 is an improved model for dealing with technological changes and needs [11]. For this study, the components of UTAUT2 will be explored to identify factors affecting TBIMT in teaching process.

A. Performance Expectancy (PE)

PE means that someone believes using technology will help them to enhance job performance [12]. In this case, teachers' confidence is assessed through effective teaching implementation using MT in the classroom [13]. Consistent use of the device will help teachers improve their confidence and quality of teaching so that it is considered a daily routine [14]. The research hypothesis is as below:

H_1. PE has a significant relationship with TBIMT.

B. Effort Expectancy (EE)

EE means the level of convenience that can affect an individual using a technology device [12]. MT is a tool with many different functions, programs and ways of use [15]. Therefore, skills are essential to ensure that teachers use these devices effectively in the classroom [6]. The research hypothesis is as below:

H_2. EE has a significant relationship with TBIMT.

C. Social Influence (SI)

SI refers to the level to which someone is viewed as very important and believed to use technology by others [12]. In

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this situation, teachers are people who use MT to accelerate the teaching process. The teaching environment using MT can be created through the influence of students, parents, administration and even the school community [16]. This support and encouragement will further enhance teachers' ability to implement meaningful teaching using MT [17]. The research hypothesis is as below:

H_3. SI has a significant relationship with TBIMT.

D. Facilitating Conditions (FC)

FC means the individual's belief in the infrastructure and technical assistance provided will support the use of technology more effectively [12]. For this study, the issue of providing a device is less of a concern as most teachers have at least one MT device [14]. However, the necessary facilities are internet facilities that can be used to access materials online [18]. Besides, the capabilities of MT also need to be emphasized so that it can support every software and application needed according to current needs [19]. The research hypothesis is as below:

H_4. FC has a significant relationship with TBIMT.

E. Hedonic Motivation (HM)

HM is referring to the enjoyment or pleasure that a person exhibits when using technology equipment [11]. In most social science studies, hedonic motivation plays a significant role in arousing the consumer's passion for integrating technology into everyday life [20]. The presence of intrinsic motivation can enhance teachers' ability to use MT with confidence to improve the quality of teaching [21]. The research hypothesis is as below:

H_5. HM has a significant relationship with TBIMT.

F. Price Value (PV)

PV refers to a cost that consumers need and spend to realize the effective use of technology [11]. In fact, during the construction of the UTAUT2 model, [11] have expressed concern that there is little cost to the consumer to realize this situation. However, MT is now widely available to all groups of people [22]. In other words, pricing is not a question as users can choose the device that suits their needs. However, teachers should be wise in comparing the price and quality of the device so that the use of the device can support the teaching process [23]. The research hypothesis is as below:

H_6. PV has a significant relationship with TBIMT.

G. Habit (HT)

HT defined as the behavior that an individual plays in establishing a tendency to use technology voluntarily [11]. Consumers are more likely to use any technology devices if they exposed to the environment [24]. In the case of this study, the habit of using MT can stimulate the driving force in improving teaching performance. Frequency of using a MT device can enhance the experience and skills of handling the [11]. The research hypothesis is as below:

H_7. HT has a significant relationship with TBIMT.

H. Conceptual Framework

Based on the literature review, there are seven components proposed by [11] to identify factors in TBIMT in teaching. The conceptual framework can summarize as Figure 1 below.

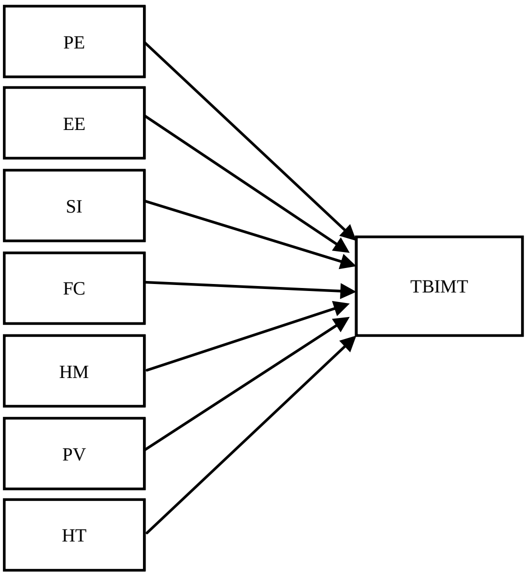

Figure 1. The conceptual framework of TBIMT.

III. METHODOLOGY

A. Respondent

The total of 524 questionnaires was distributed to secondary school teachers in the state of Kedah, Malaysia, using systematic random sampling. In this case, a total of 422 forms (80.53%) returned and analyzed successfully. The respondents were represented by 124 male teachers (29.38%) and 298 female teachers (70.68%). Of the age categories, 160 teachers (37.92%) were under 40, while the remaining 262 (62.08%) were aged 41 years and above. The average sample has at least one MT device used in the school environment.

B. Instrumentation

The instrument in this study adapted from UTAUT2 model [11]. The original version of the instrument is in English, while the preparation of this instrument is in Malay. Therefore, the method of back translation, as suggested by [25], has been implemented. To ensure the validity of the content and instrument, four experts in the field of education technology and education management conducted a review to ensure that the questionnaire used complies with the research objectives. In total, there were 38 items used on a 5-point Likert scale, starting “Strongly Disagree” (1) to “Strongly Agree” (5).

C. Data Analysis

This study was analyzed using SmartPLS3 software to identify the impact of UTAUT2 components on TBIMT. There are two things to keep in mind when making a PLS-SEM report, namely the measurement model and structure model [26]. The assessment of measurement model was used to explore the validity and reliability of each component [27]. Also, the assessment of structural model is used to measure the relationships between the components built into the study model [27]. PLS-SEM is preferred because it provides a user-friendly interface, secure method and accurate analysis of empirical data based on the research.

IV. RESULT

A. Assessment of Measurement Model

In this section, the model evaluated through convergent validity, which is a degree of measurement that ensures that the two components are related to each other [28]. Two validity methods proposed are composite reliability (CR) and also the average variance extracted (AVE). [26] suggests that the value of CR should be more than 0.70, while the value of AVE should be greater than 0.50 to complete convergent validity requirements.

Based on Table 1 below, the value of CR for each component in UTAUT2 has exceeded 0.70 while the value of AVE is also above 0.5, as suggested. This situation proves that all components of UTAUT2 meet the requirements of convergent validity.

Table 1: Result of convergent validity

Constructs	Item	Factor Loading	Cronbach Alpha	CR	AVE
Performance Expectancy (PE)	PE1	0.829	0.938	0.953	0.801
	PE2	0.898			
	PE3	0.913			
	PE4	0.917			
	PE5	0.916			
Effort Expectancy (EE)	EE1	0.919	0.959	0.968	0.859
	EE2	0.930			
	EE3	0.930			
	EE4	0.926			
	EE5	0.930			
Social Influence (SI)	SI1	0.735	0.860	0.899	0.642
	SI2	0.821			
	SI3	0.828			
	SI4	0.802			
	SI5	0.818			
Facilitating Conditions (FC)	FC1	0.864	0.914	0.936	0.745
	FC2	0.891			
	FC3	0.902			
	FC4	0.822			
	FC5	0.836			
Hedonic Motivation (HM)	HM1	0.917	0.950	0.962	0.834
	HM2	0.927			
	HM3	0.928			
	HM4	0.923			
	HM5	0.870			
Price Value (PV)	PV1	0.882	0.926	0.944	0.772
	PV2	0.868			
	PV3	0.902			
	PV4	0.891			
	PV5	0.850			
Habit (HT)	HT1	0.741	0.899	0.927	0.718
	HT2	0.901			
	HT3	0.895			
	HT4	0.897			
	HT5	0.788			
Behavioral Intention (BI)	BI1	0.916	0.920	0.949	0.862
	BI2	0.922			
	BI3	0.948			

Meanwhile, discriminant validity also tested, as shown in Table 2 below. Discriminant validity is a test to determine the differences between components so that there is no overlap in meaning [29], [30]. As a result of the discriminant validity test, the indicator's outer loading should be higher value relevance than the relation of the other components [28].

Table 2: Result of discriminant validity

	PE	EE	SI	FC	HM	PV	HT	BI
PE	**0.895**							
EE	0.671	**0.927**						
SI	0.471	0.598	**0.801**					
FC	0.513	0.594	0.540	**0.863**				
HM	0.616	0.646	0.535	0.658	**0.913**			
PV	0.400	0.479	0.452	0.654	0.509	**0.879**		
HT	0.598	0.658	0.557	0.616	0.667	0.533	**0.847**	
BI	0.550	0.658	0.477	0.580	0.654	0.508	0.717	**0.929**

According to Table 2, the shaded numbers have higher values than the others below them. From the findings, all components of UTAUT2 have discriminant validity that meets the requirements as suggested by [28].

B. Assessment of Structural Model

To test the hypothesis, the bootstrapping method was used based on a sample size of 500 by default. Table 3 shows that only three components of UTAUT2 support TBIMT. Based on the result, EE predicted a positive relationship with TBIMT (β = 0.239, t = 3.919, p <0.05), hence H_2 was accepted. Meanwhile, H_5 also supported the finding that HM predicted a positive relationship with TBIMT (β = 0.195, t = 3.273, p <0.05). Finally, HT also contributed positively to TBIMT (β = 0.380, t = 6.161, p <0.05), hence H_7 accepted.

Other findings such as H_1, H_3, H_4 and H_6 failed to support the proposed hypothesis. Overall, the UTAUT2 component in this study contributed 60.7% to TBIMT.

Table 3: Result of hypothesis testing

	Relationship	Std. Beta	T-value	P-value	Result
H_1	PE ---> BI	0.010	0.221	0.825	Rejected
H_2	EE ---> BI	0.239	3.919	0.000	**Accepted**
H_3	SI ---> BI	-0.047	0.960	0.337	Rejected
H_4	FC ---> BI	0.042	0.831	0.406	Rejected
H_5	HM ---> BI	0.195	3.273	0.001	**Accepted**
H_6	PV ---> BI	0.081	1.945	0.052	Rejected
H_7	HT ---> BI	0.380	6.161	0.000	**Accepted**

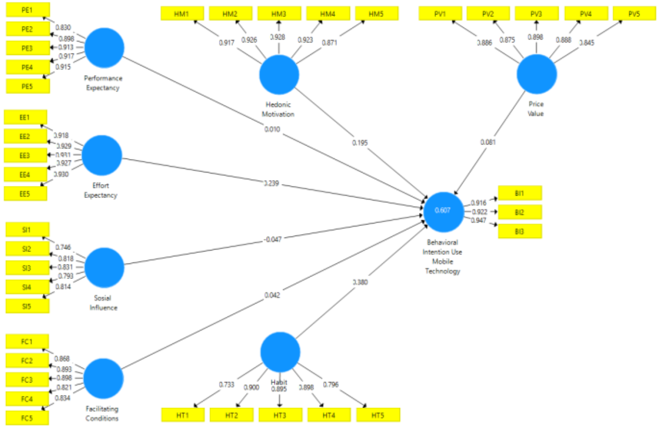

Figure 2: The structural model of UTAUT2 on TBIMT

V. DISCUSSION

According to the study, PE has no positive relationship with TBIMT. That means $\mathbf{H_1}$ has **rejected**. These results have supported previous studies such as [10], [31]. A study by [31] found that the use of MT failed to improve teacher performance in shaping more meaningful teaching. Teachers also find it challenging to adapt skills and increase their motivation to use new technologies like MT consistently [10].

Meanwhile, research has shown that EE has a positive relationship with TBIMT. Therefore, $\mathbf{H_2}$ was **accepted**. This finding supports the research conducted by [32], [33]. Earlier, a study by [32] on 159 respondents indicated that users who integrate mobile devices believe it can be a learning tool to help improve learning outcomes. Teachers are also encouraged to enhance their skills, knowledge and also the experience of using MT to create a more positive impact on teaching [33].

On the other hand, SI has no positive relationship with TBIMT. This situation led to **H_3** being **rejected**. These findings are the same as studies conducted by [10], [34]. A study by [34] on 359 samples stated that teachers find it difficult to gain support from the surrounding community in integrating technology in school environments, especially in developing countries. This phenomenon also occurs when management's vision does not emphasize the importance of using MT, especially in teaching and learning [10].

According to the study, FC has no positive relationship with TBIMT. Therefore, **H_4** was **rejected**. Several previous studies have shown results that are in line with the studies conducted [33], [35]. Studies by [33] show that facilitating conditions is not a key factor for educators to implement quality teaching involving MT. Meanwhile, research on pre teachers also found that this component did not contribute to behavior in implementing MT-based learning, such as m-learning [35].

As expected, HM has a positive relationship with TBIMT, and **H_5** was **accepted**. This result is the same with previous studies such as [20], [36]. A study conducted by [20] in India found that high intrinsic consumer motivation is significant with the adoption of MT in shaping more exciting learning. HM will also facilitate users to embrace every new technology introduced, including online learning information system [36].

The PV component has been less responsive in previous studies involving the UTAUT2 model. Many scholars have stated that the PV component is irrelevant to several studies involving current technology adoption. This study proves that PV has no positive relationship with TBIMT. Therefore, **H_6** was **rejected**. This situation is similar to the study conducted by [37], [38]. Previously, a study by [37] found that price value was not a contributor to technology adoption, including e-learning despite comparing Qatar and the United States of America. The meta-analysis also concludes that these components are found to be less relevant in certain studies [38]. This situation may also be since mobile devices today are very cheap, and many resources are available online for free.

The analysis of the last component of UTAUT2 shows that HT has a positive relationship with TBIMT, and **H_7** was **accepted**. The findings have also supported by previous studies in which a user's habit can increase the individual's acceptance of MT [20], [39]. The positive effect will increase the user's ability to use MT more efficiently, including multitasking [20]. Studies by [39] of 228 educators in Iraq also found that HT contributes positively, especially using online learning system portals such as Moodle and VLE.

VI. CONCLUSION

According to the study, TBIMT influenced by three factors, namely EE, HM, and HT. This phenomenon also creates teachers' readiness to integrate MT in improving the quality of teaching. Teachers can manipulate the advantages of MT to create more fun teaching strategies. With the availability of online resources, MT can help teachers to shape the culture of the 21st-century learning environment.

In conclusion, teachers in the state of Kedah, Malaysia is ready and accepting MT as a teaching aid. For future studies, several other factors may be used to combine with UTAUT2 elements. Among the factors that can be highlighted such as the influence of principal leadership, teacher self-efficacy, and student engagement.

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REFERENCES

1. B.W. O'Bannon, S. Waters, J. Lubke, J. Cady, and K. Rearden, "Teachers and students poised to use mobile phones in the classroom.", Computers in the Schools, 2017; vol. 34(3), pp. 125–141.
2. Z. Khlaif, "Teachers' perceptions of factors affecting their adoption and acceptance of MT in K-12 settings.", Computers in the Schools, 2018; vol. 35(1), pp. 49–67.
3. H. Montrieux, R. Vanderlinde, T. Schellens and L. De Marez, "Teaching and learning with MT: A qualitative explorative study about the introduction of tablet devices in secondary education.", 2015; PLoS ONE, vol. 10(12), pp. 1–17.
4. W. Admiraal, L. Kester, C. Janssen, M. De Jonge, M. Louws, L. Post, and D. Lockhorst, "Personalizing learning with MT in secondary education.", In 14th International Conference M-Learning, 2018, pp. 62–69.
5. Z. Karabatzaki, A. Stathopoulou, G. Kokkalia, E. Dimitriou, P.I. Loukeri, A. Economou, and A. Drigas, "Mobile application tools for students in secondary education. An evaluation study.", International Journal of Interactive Mobile Technologies, 2018; vol. 12(2), pp. 142–161.
6. A. Nawi, M.I. Hamzah, C.R. Chua, and A.H.Tamuri, "Adoption of MT for teaching preparation in improving teaching quality of teachers.", International Journal of Instruction, 2015; vol. 8(2), pp. 113–124.
7. M.M. Grant, "Difficulties in defining m-learning: Analysis, design characteristics, and implications.", Educational Technology Research and Development, 2019; vol. 67(2), pp. 361–388.
8. T.K.F. Chiu, and D. Churchill, "Adoption of mobile devices in teaching: changes in teacher beliefs, attitudes and anxiety.", Interactive Learning Environments, 2015, vol. 24(2), pp. 317–327.
9. J. Leem, and E. Sung, "Teachers' beliefs and technology acceptance concerning smart mobile devices for SMART education in South Korea.", British Journal of Educational Technology, 2018; vol. 0(0), pp. 601–613.
10. N. Testa, and A. Tawfik, "Mobile, but are we better? Understanding teacher's perception of a MT integration using the UTAUT framework.", Journal of Formative Design in Learning, 2017; vol. 1(2), pp. 73–83.
11. V. Venkatesh, J. Thong, and X. Xu, X, "Consumer acceptance and user of information technology: Extending the UTAUT.", MIS Quarterly, 2012; vol. 36(1), pp. 157–178.
12. V. Venkatesh, M.G. Morris, G.B. Davis, and F.D. Davis, "User acceptance of information technology: toward a unified view.", MIS Quarterly, 2003; vol. 27(3), pp. 425–478.
13. J. Osakwe, N. Dlodlo, and N. Jere, "Learners' perceptions on the adoption of MT in high schools: A case of Otjozondjupa region in Namibia.", In P. Cunnigham & M. Cunnigham (Eds.), IST-Africa 2017 Conference Proceedings 2017; pp. 1–7.
14. K.A. Baharun, S. Siraj and M.F.A. Ghani, "Penerimaan m-pembelajaran dalam kalangan pensyarah institut pendidikan guru Malaysia melalui UTAUT: Satu kajian awal.", Jurnal Kepimpinan Pendidikan, 2017; vol. 4(2), pp. 56–73.
15. Y.T. Sung, K.E. Chang, and T.C Liu, T.-C. "The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis.", Computers & Education, 2016; vol. 94, pp. 252–275.
16. U. Akcil, Z. Altinay, G. Dagli, and F. Altinay, "The role of technology leadership: Innovation for school leadership in digital age.", In The 15th International Scientific Conference eLearning and Software for Education, 2019; pp. 323–329.

17. M.A. Ozerbas, and B.H. Erdogan, “The effect of the digital classroom on academic success and online technologies self-efficacy.”, Educational Technology and Society, 2016; vol. 19(4), pp. 203–212.
18. S.N.A Anuar, N.F. Mokhtar, and K. Set “Teachers behaviour toward digital education.”, Journal of Information System and Technology Management, 2019; vol. 4(13), pp. 32–47.
19. K. Saraubon, “Learning media repository and delivery system for smart classroom using IoT and MT.”, International Journal of Interactive Mobile Technologies, 2019; 13(2), pp. 66–77.
20. V.J. Bharati, and R. Srikanth, “Modified UTAUT2 model for m-learning among students in India.”, International Journal of Learning and Change, 2018; vol. 10(1), pp. 5-20.
21. A. Rohatgi, R. Scherer, and O.E. Hatlevik, “The role of ICT self-efficacy for students’ ICT use and their achievement in a computer and information literacy test.”, Computers and Education, 2016; vol. 102, pp. 103–116.
22. L. Dias, and A. Victor, “Teaching and learning with mobile devices in the 21st century digital world: Benefits and challenges.”, European Journal of Multidisciplinary Studies, 2017; vol. 5(1), pp. 339–344.
23. N. Shaw, and K. Sergueeva, “The non-monetary benefits of mobile commerce: Extending UTAUT2 with perceived value.”, International Journal of Information Management, 2019, vol. 45(1), pp. 44–55.
24. K. Tamilmani, N.P. Rana, and Y.K. Dwivedi, “Use of ‘Habit’ is not a habit in understanding individual technology adoption: A review of UTAUT2 based empirical studies.”, In A. Elbanna, Y. K. Dwivedi, D. Bunker, & D. Wastell (Eds.), Smart Working, Living and Organising, Cham: Springer International Publishing, 2019; vol. 533, pp. 277–294.
25. R.W. Brislin, “Back translation for cross-cultural research.”, Journal of Cross Cultural Psychology, 1970; 1(3), pp. 185-216.
26. J.F Hair, J.J. Risher, M. Sarstedt, and C.M. Ringle, “When to use and how to report the results of PLS-SEM.”, European Business Review, 2019; vol. 31(1), pp. 2–24.
27. F. Ali, S.M. Rasoolimanesh, M. Sarstedt, C.M. Ringle, and K. Ryu, “An assessment of the use of PLS-SEM in hospitality research.”, International Journal of Contemporary Hospitality Management, 2018; vol. 30(1), pp. 514–538.
28. C. Fornell, and D.F. Larcker, “Evaluating structural equation models with unobservable variables and measurement error.”, Journal of Marketing Research, 1981; vol. 18(1), pp. 39–50.
29. Z. Mohamed, and N.H. Ubaidullah, “Evaluation of the Teaching Quality Model and its relationship with students’ academic performance through PLS-SEM.”, International Journal of Recent Technology and Engineering, 2019; vol. 8(3), pp. 4035–4039.
30. M.M.M. Zalli, H. Nordin, and R.A. Hashim, “The role of self-regulated learning strategies on learners’ satisfaction in Massive Open Online Course (MOOC): Evidence from Malaysia MOOC.”, International Journal of Innovative Technology and Exploring Engineering, 2019; vol. 8(10), pp. 2286–2290.
31. S. Nandwani, and S. Khan, “Teachers’ intention towards the usage of technology: An investigation using UTAUT model.”, Journal of Education & Social Sciences, 2016; vol. 4(2), pp. 95–111.
32. M.S. Ahmed, and A. Kabir, “The acceptance of smartphone as a m-learning tool: students of Busines Studies in Bangladesh.”, Malaysian Online Journal of Educational Technology, 2018; vol. 6(2), pp. 38–47.
33. O. Alharbi, H. Alotebi, A. Masmali, and N. Alreshidi, “Instructor acceptance of m-learning in Saudi Arabia: A case study of Hail University.”, International Journal of Business and Management, 2017; vol. 12(5), pp. 27–35.
34. N. Thongsri, L. Shen, Y. Bao, and I.M. Alharbi, “Integrating UTAUT and UGT to explain behavioural intention to use m-learning.”, Journal of Systems and Information Technology, 2018; vol. 20(3), pp. 278–297.
35. J.F.D. Pullen, K. Swabey, M. Abadooz, and R.S.T Kaur, “Pre-service teachers’ acceptance and use of m-learning in Malaysia.”, Australian Educational Computing, 2015; vol. 30(1), pp. 1–30.
36. A. Raman, and Y. Don, “Preservice teachers’ acceptance of learning management software: An application of the UTAUT2 model.”, International Education Studies, 2013; vol. 6(7), pp. 157–164.
37. M. El-Masri, and A. Tarhini, “Factors affecting the adoption of e-learning systems in Qatar and USA: UTAUT2.”, Educational Technology Research and Development, 2017; vol. 65(3), pp. 743–763.
38. K. Tamilmani, N. Rana, Y. Dwivedi, G.P. Sahu, and S. Roderick, “Exploring the role of “price value” for understanding consumer adoption of technology: A review and meta-analysis of UTAUT2 based empirical studies.”, 22nd Pacific Asia Conference on Information Systems, 2018; vol. 26(6), pp. 1-10.
39. A.A.A. Zwain, “Technological innovativeness and information quality as neoteric predictors of users’ acceptance of learning management system.”, Interactive Technology and Smart Education, 2019; vol. 16(3), pp. 239–254.

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